Docket No.: GR1-2790-U Sheet 5 of 34 Ser No.: 09/649,413 Filing Date: App. ant: MATHUR, Vijay K.

MULTI-PHASE CALCIUM SILICATE HYDRATES, Title:

METHODS FOR THEIR PREPARATION, et al CALL: R. Reams Goodloe, Jr. Phone: (253) 859-9128/ Reg.#32,466/ Cust#20793

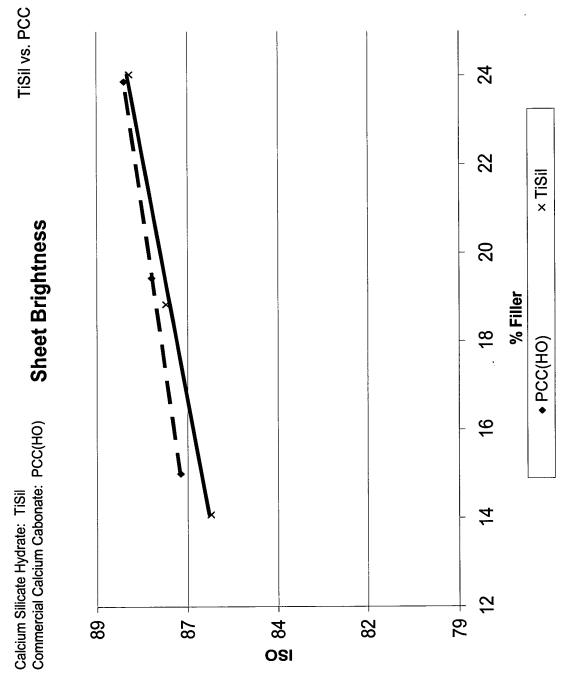


Fig 10: Sheet Brightness results for TiSil and PCC(HO)

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MATHUR, Vijay K.

Title: MULTI-PHASE CALCIUM SILICATE HYDRATES, METHODS FOR THEIR PREPARATION, et al CALL: R. Reams Goodloe, Jr. Phone: (253) 859-9128/ Reg.#32,466/ Cust#20793

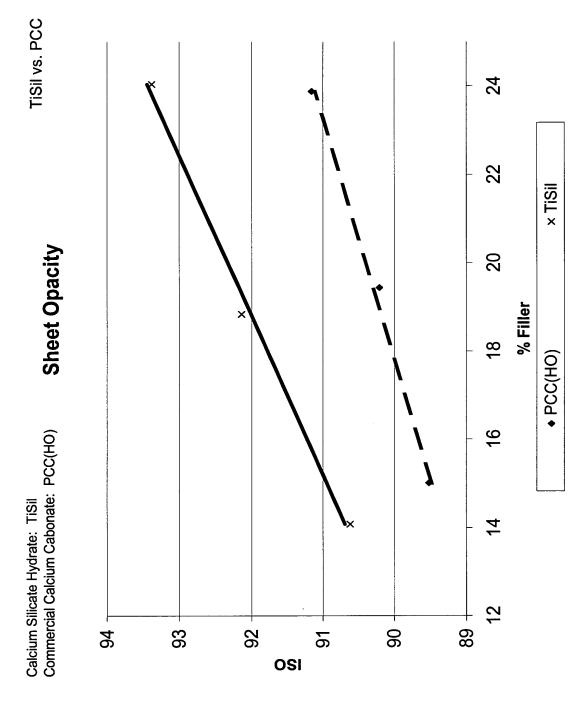


Fig 11: Sheet Opacity results for TiSil and PCC(HO)

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Title: MULTI-PHASE CALCIUM SILICATE HYDRATES, METHODS FOR THEIR PREPARATION, et al CALL: R. Reams Goodloe, Jr. Phone: (253)859-9128/ Reg.#32,466/ Cust#20793

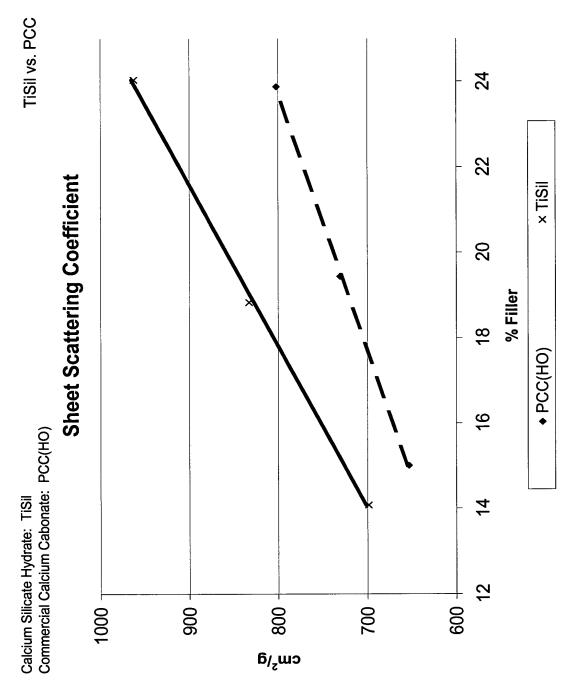


Fig 12: Sheet Scattering Coefficient results for TiSil and PCC(HO)

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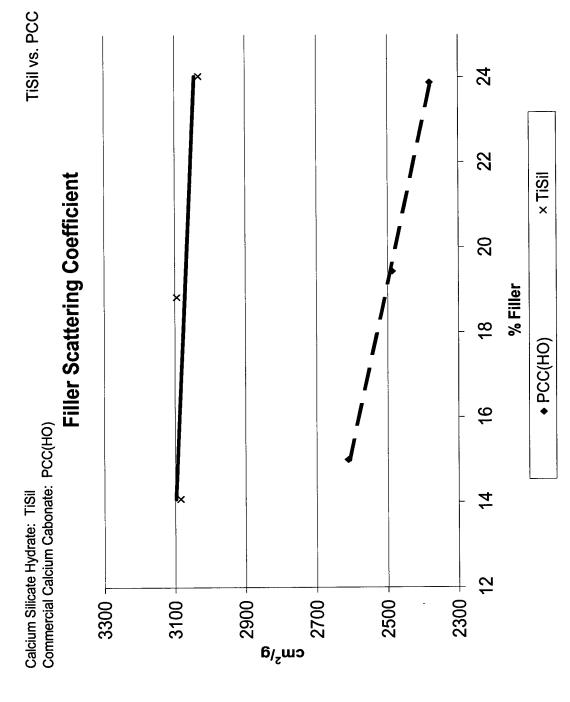


Fig 13: Filler Scattering Coefficient results for TiSil and PCC(HO)

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Serial 09/649,413 Filing Date: 08/26/2
Applicat MATHUR, Vijay K.
Title: MULTI-PHASE CALCIUM SILICATE HYDRATES, 08/26/2009

METHODS FOR THEIR PREPARATION, et al

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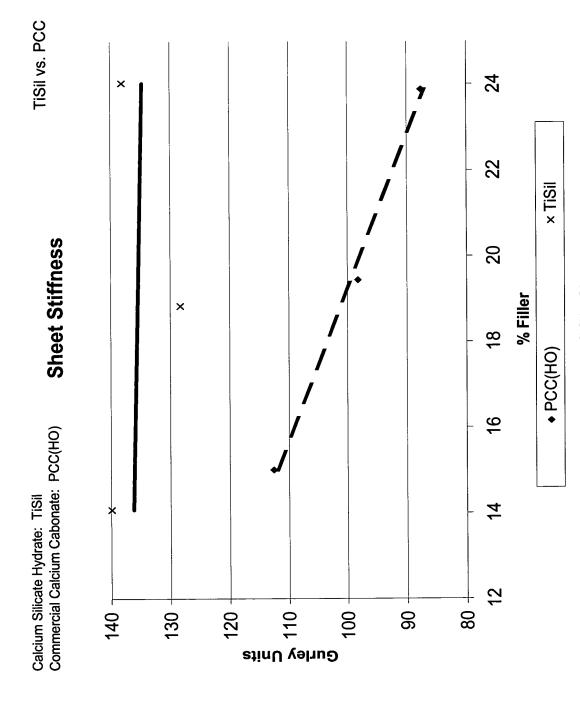


Fig 14: Sheet Stiffness results for TiSil and PCC(HO)

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Title: MULTI-PHASE CALCIUM SILICATE HYDRATES,
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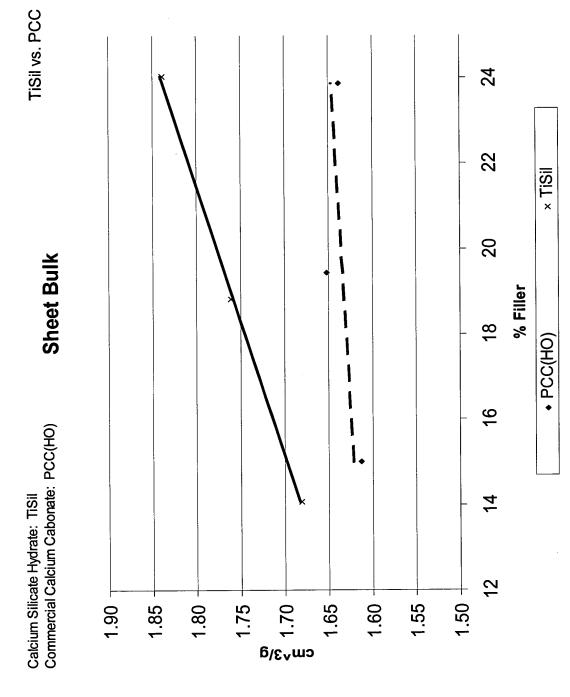


Fig 15: Sheet Bulk results for TiSil and PCC(HO)

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int: MATHUR, Vijay K. MULTI-PHASE CALCIUM SILICATE HYDRATES, Title:

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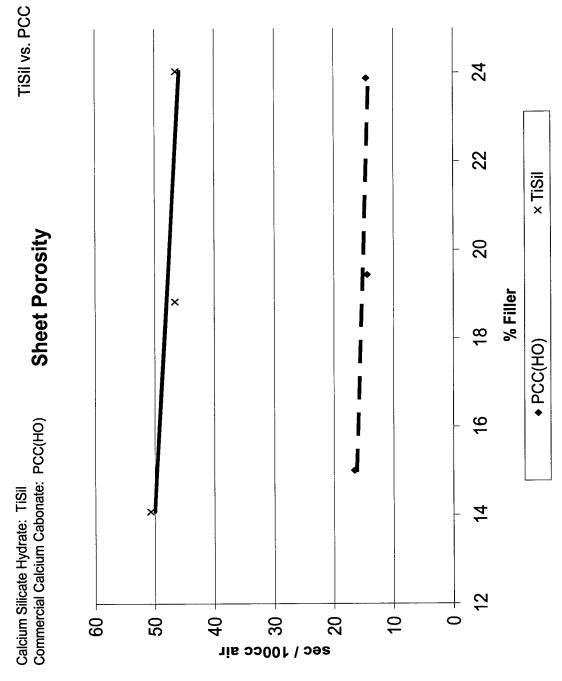


Fig 16: Sheet Porosity results for TiSil and PCC(HO)

METHODS FOR THEIR PREPARATION, et al CALL: R. Reams Goodloe, Jr. Phone: (253)859-9128/ Reg.#32,466/ Cust#20793

**Sheet Tensile Index** 

Calcium Silicate Hydrate: TiSil Commercial Calcium Cabonate: PCC(HO)

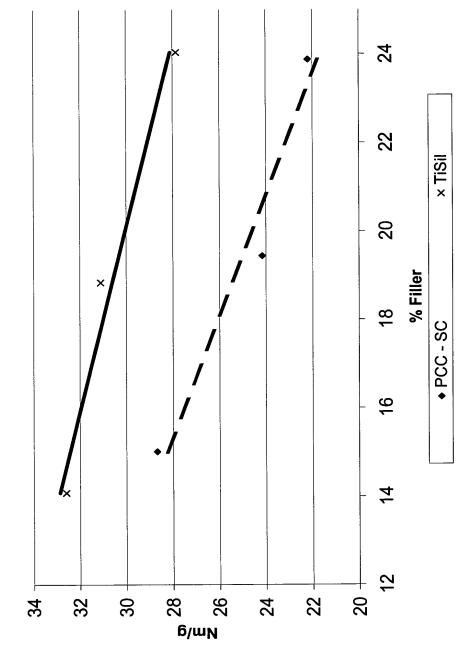


Fig 17: Sheet Tensile Index results for TiSil and PCC(HO)

TiSil vs. PCC

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Title:

METHODS FOR THEIR PREPARATION, et al

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Phone: (253)859-9128/ Reg.#32,466/ Cust#20793

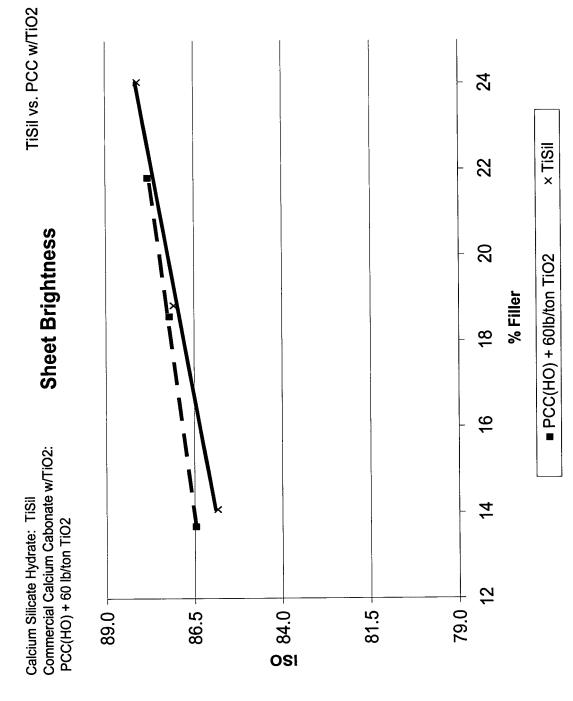


Fig 18: Sheet Brightness results for TiSil and PCC(HO) w/TiO<sub>2</sub>

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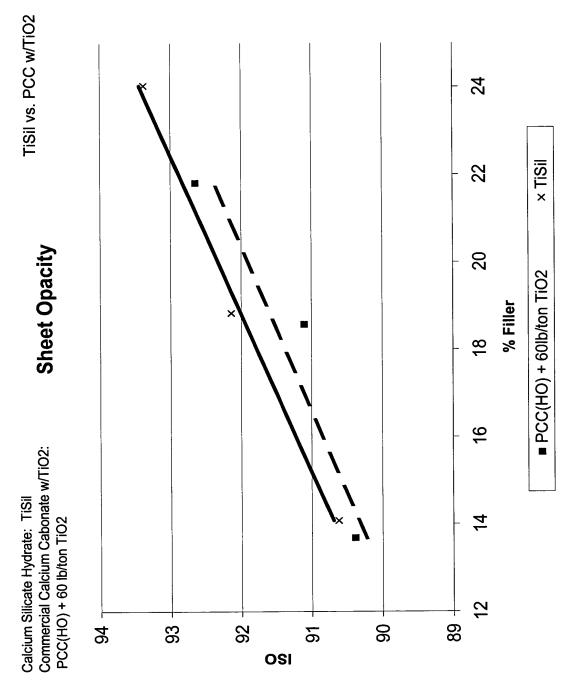


Fig 19: Sheet Opacity results for TiSil and PCC(HO) w/TiO<sub>2</sub>

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Applica MATHUR, Vijay K.
Title: MULTI-PHASE CALCIUM SILICATE HYDRATES,

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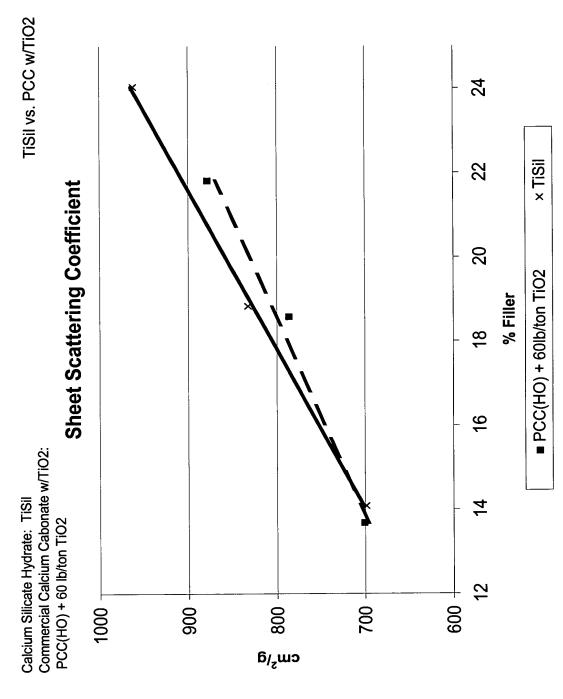


Fig 20: Sheet Scattering Coefficient results for TiSil and PCC(HO) w/TiO<sub>2</sub>

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Appront: MATHUR, Vijay K.
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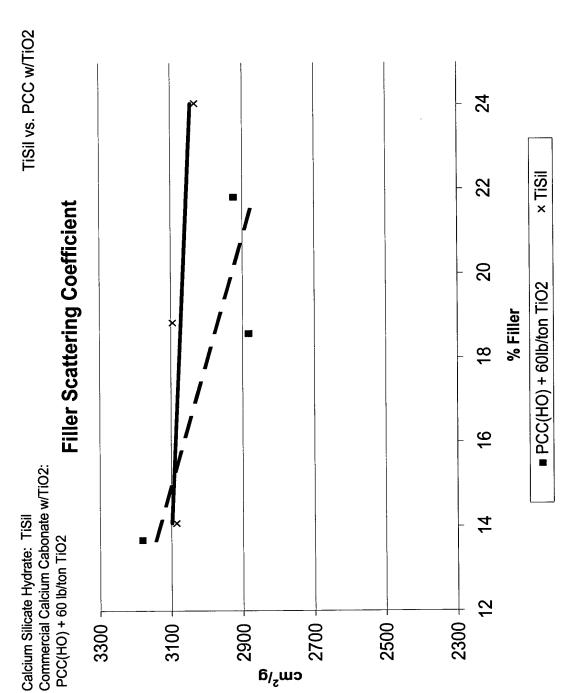


Fig 21: Filler Scattering Coefficient results for TiSil and PCC(HO) w/TiO2

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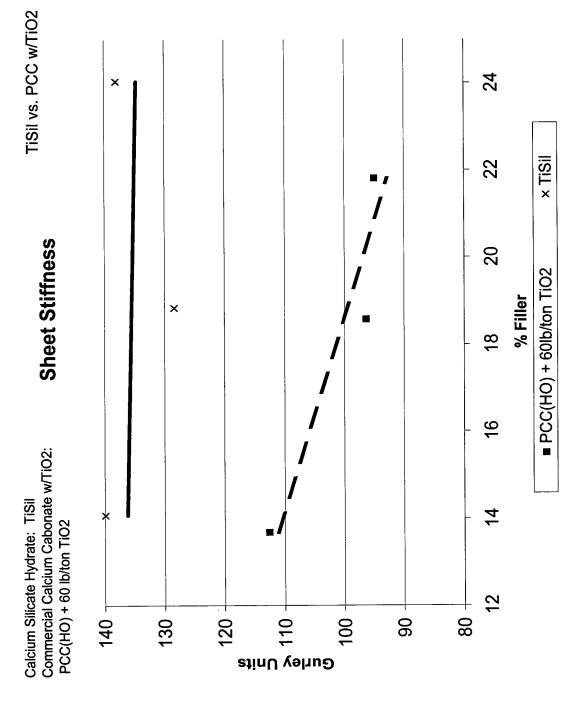


Fig 22: Sheet Stiffness results for TiSil and PCC(HO) w/TiO2

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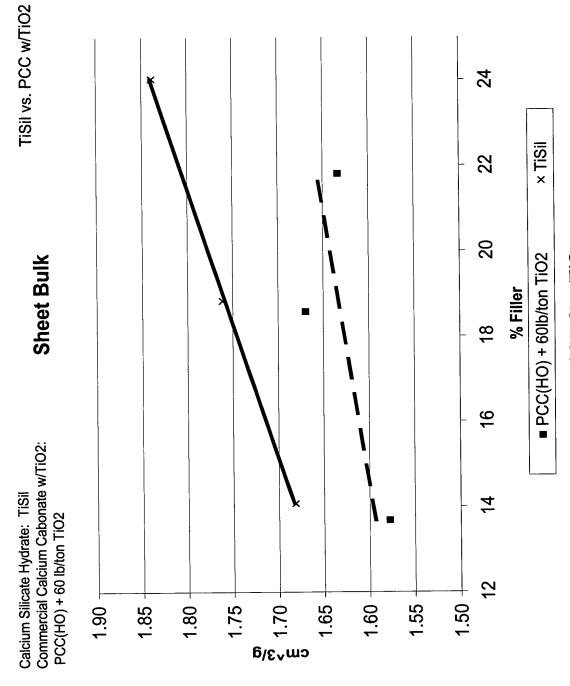


Fig 23: Sheet Bulk results for TiSil and PCC(HO) w/TiO2

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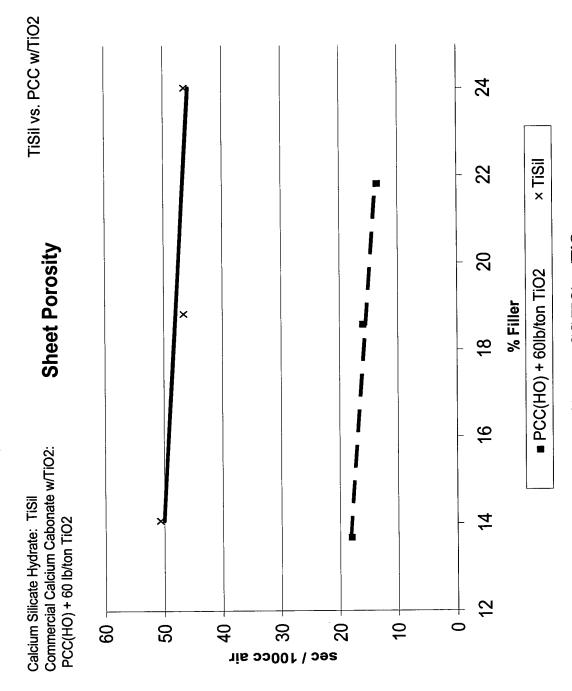


Fig 24: Sheet Porosity results for TiSil and PCC(HO) w/TiO<sub>2</sub>

METHODS FOR THEIR PREPARATION, et al

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**Sheet Tensile Index** 

Calcium Silicate Hydrate: TiSil Commercial Calcium Cabonate w/TiO2: PCC(HO) + 60 lb/ton TiO2

TiSil vs. PCC w/TiO2

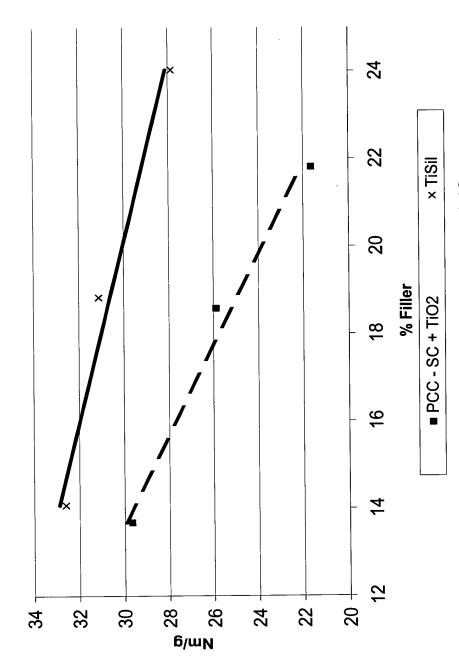


Fig 25: Sheet Tensile Index results for TiSil and PCC(HO) w/TiO2

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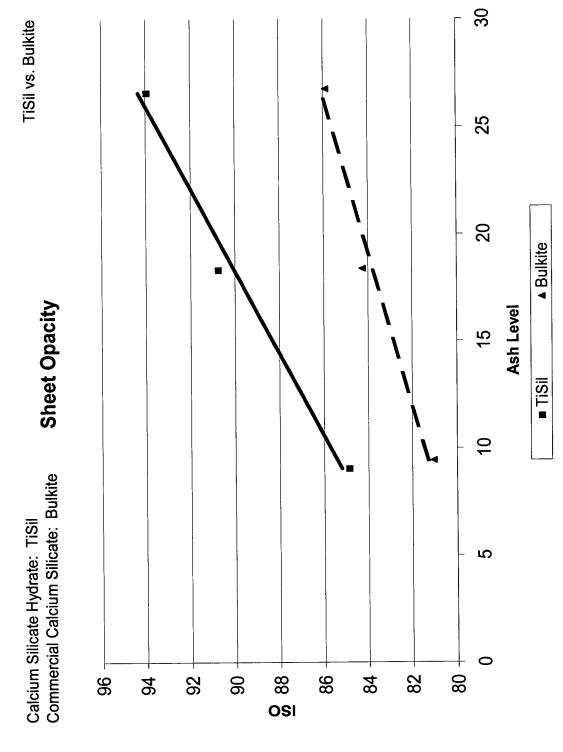


Fig 26: Sheet Opacity results for TiSil and Bulkite

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Title: MULTI-PHASE CALCIUM SILICATE HYDRATES,
METHODS FOR THEIR PREPARATION, et al
CALL: R. Reams Goodloe, Jr.
Phone: (253) 859-9128/ Reg.#32,466/ Cust#20793

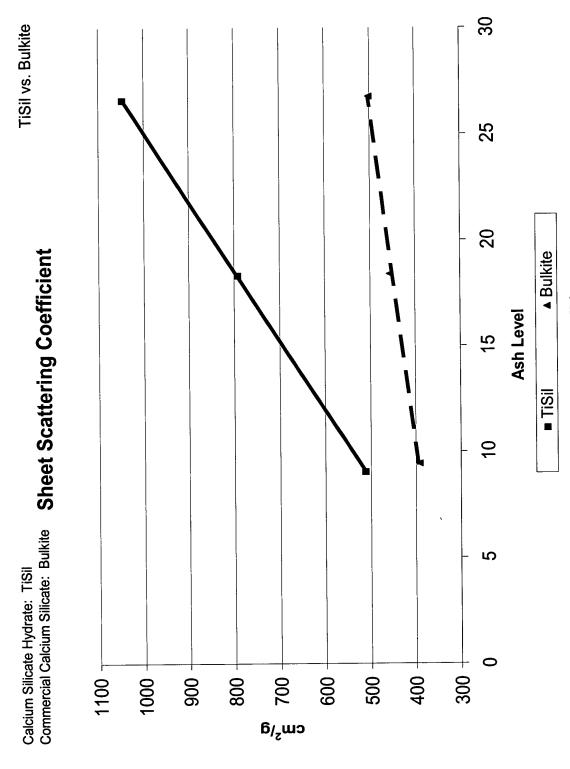


Fig 27: Sheet Scattering Coefficient results of TiSil and Bulkite

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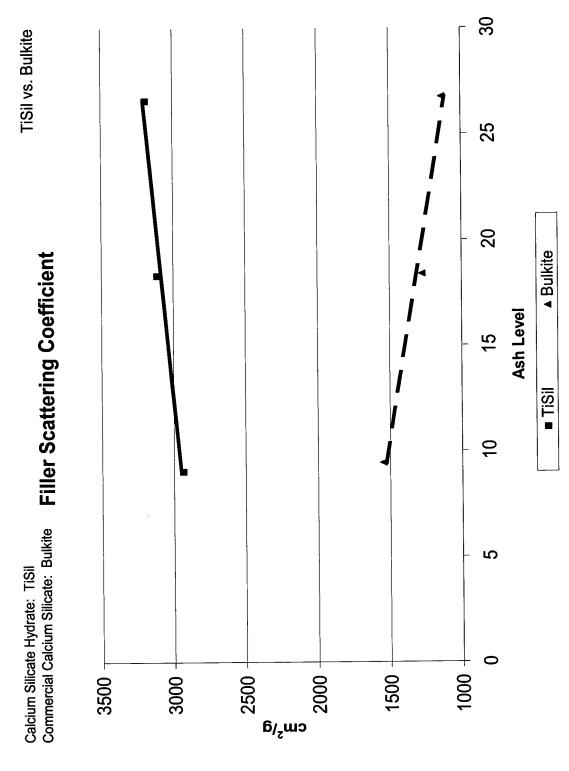


Fig 28: Filler Scattering Coefficient results for TiSil and Bulkite

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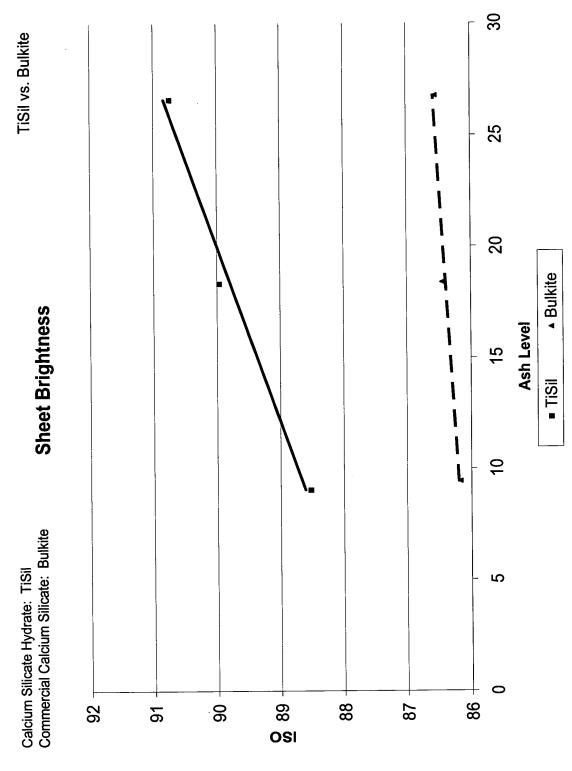


Fig 29: Sheet Brightness results for TiSil and Bulkite

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Accent: MATHUR, Vijay K.
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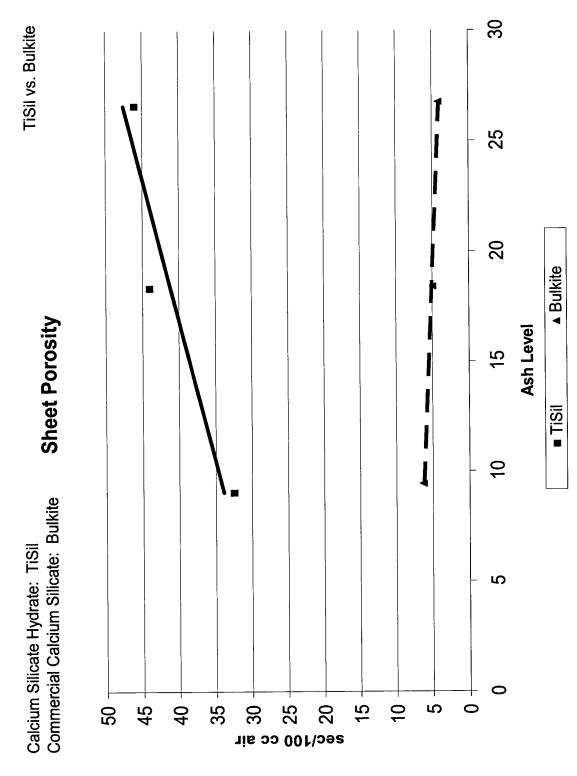


Fig 30: Sheet Porosity results for TiSil and Bulkite

Docket No.: GR1-2790-U Serial No.: 09/649,413 Sheet 26 of Filing Date: 6/2000 plicant: MATHUR, Vijay K. MULTI-PHASE CALCIUM SILICATE HYDRATES METHODS FOR THEIR PREPARATION, CALL: R. Reams Goodloe, Jr. Phone: (253)859-9128/ Reg.#32,466/ Cust#20793

TiSil vs. HuberSil and **Huber Carbonate** 

**Normalized Sheet Opacity** Commercial Silicate: HuberSil
Commercial Carbonate: Huber Carbonate

Calcium Silicate Hydrate: TiSil

(Interpolated to 6% Filler)

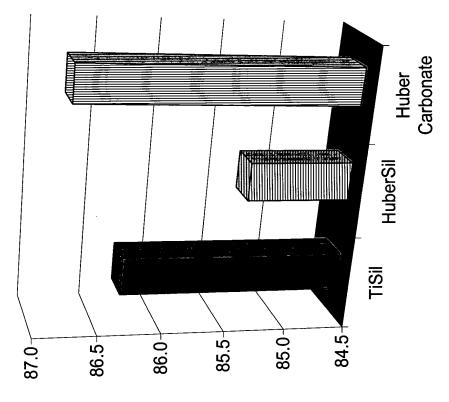


Fig 31: Normalized Sheet Opacity results for newsprint sheets containing various fillers, interpolated

to 6% Ash.

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**Huber Carbonate** TiSil vs. HuberSil and

**Sheet Ink Penetration** 

Calcium Silicate Hydrate: TiSil Commercial Silicate: HuberSil Commercial Carbonate: Huber Carbonate

(Interpolated to 6% Filler)

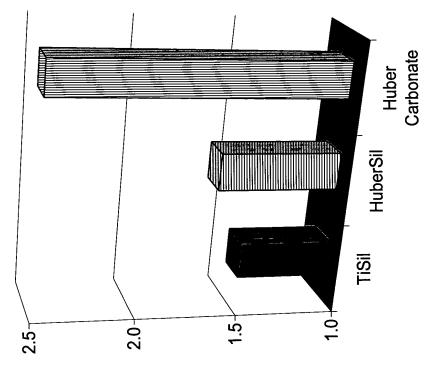


Fig 32: Sheet Ink Penetration results on newsprint sheets containing various fillers, interpolated to 6% Ash.

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MULTI-PHASE CALCIUM SILICATE HYDRAT

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TiSil vs. HuberSil and **Huber Carbonate** 

**Sheet Show Through** 

Commercial Silicate: HuberSil Commercial Carbonate: Huber Carbonate

Calcium Silicate Hydrate: TiSil

(Interpolated to 6% Filler)

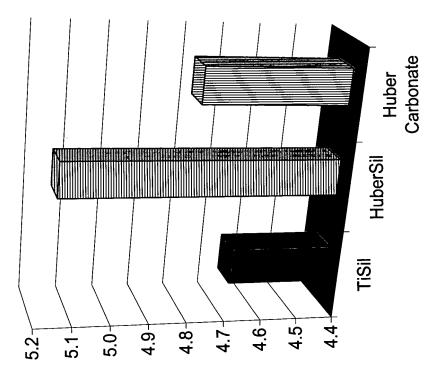


Fig 33: Sheet Show Through results on newsprint containing various fillers, interpolated to 6% Ash

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TiSil vs. HuberSil and **Huber Carbonate** 

**Sheet Print Through** 

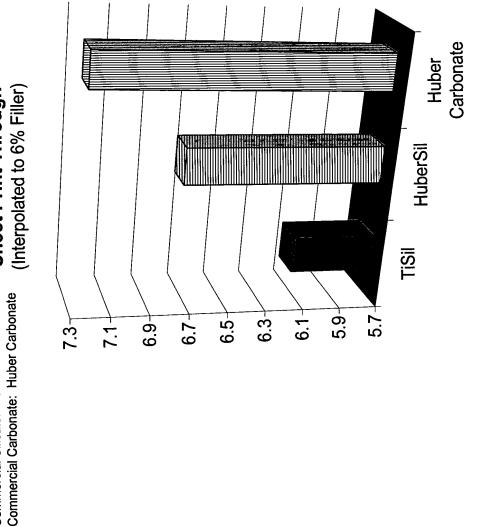


Fig. 34: Sheet Print Through results on newsprint sheets containing various fillers, interpolated to 6% Ash.

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TiSil vs. HuberSil and **Huber Carbonate** 

**Gurley Sheet Porosity** 

(Interpolated to 6% Filler)

Commercial Carbonate: Huber Carbonate

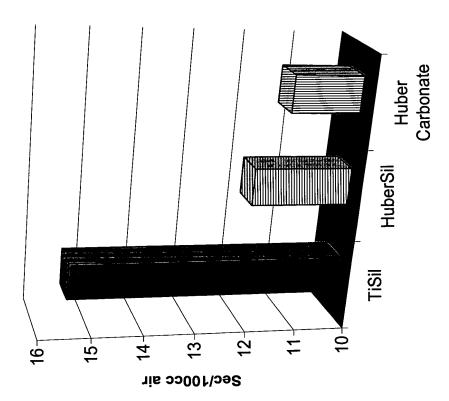
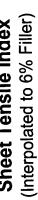


Fig 35: Gurley Sheet Porosity results for newsprint sheets containing various fillers, interpolated to 6% Ash

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**Huber Carbonate** TiSil vs. HuberSil and

**Sheet Tensile Index** 



Commercial Carbonate: Huber Carbonate

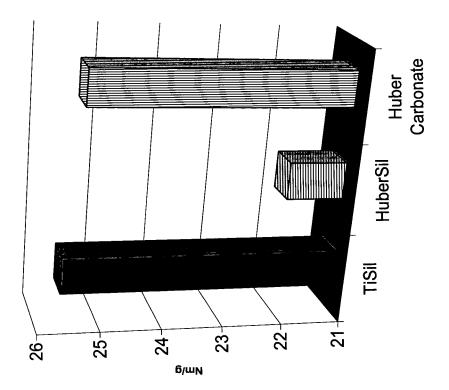


Fig 36: Sheet Tensile Index results for newsprint sheets containing various fillers, interpolated to 6% Ash

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TiSil vs. HuberSil and **Huber Carbonate** 

**Gurley Sheet Stiffness** 

(Interpolated to 6% Filler)

Commercial Carbonate: Huber Carbonate

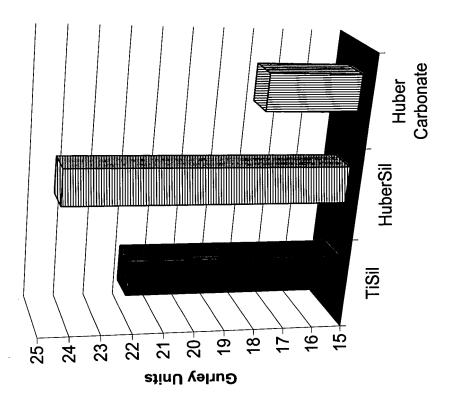


Fig 37: Gurley Sheet Stiffness results for newsprint sheets containing various fillers, interpolated to 6% Ash

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TiSil vs. HuberSil and **Huber Carbonate** 

## Sheet Static Coefficient of Friction

Calcium Silicate Hydrate: TiSil Commercial Silicate: HuberSil

Commercial Carbonate: **Huber Carbonate** 

(Interpolated to 6% Filler)

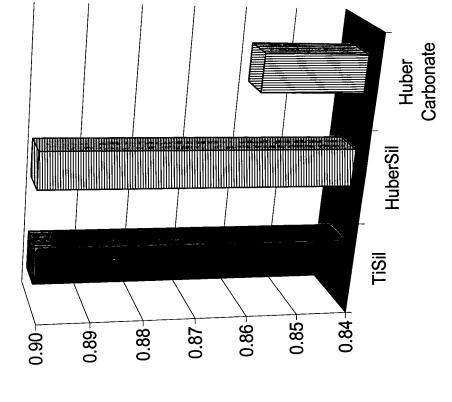


Fig 38: Sheet Static Coefficient of Friction results for newsprint sheets containing various fillers, interpolated to 6% Ash

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**Huber Carbonate** TiSil vs. HuberSil and

## **Sheffield Sheet Smoothness**

Calcium Silicate Hydrate: TiSil Commercial Silicate: HuberSil Commercial Carbonate: Huber Carbonate

(Interpolated to 6% Filler)

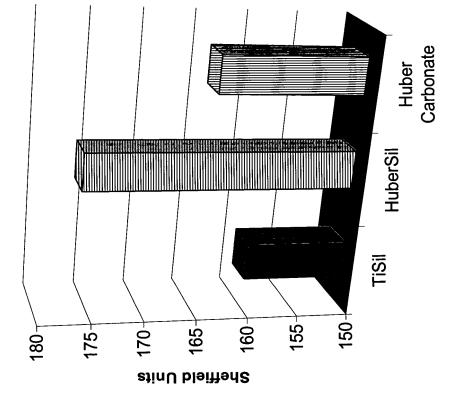


Fig 39: Sheffield Sheet Smoothness results for newsprint sheets containing various fillers, interpolated

to 6% Ash.